

04/28/14    Agenda:

- Remediation Packet for Unit 10 is on line
  - It is due by Monday 5/05
- Review Homework
  - NGA Review Packet - Parts 1 & 2
- NGA Review
  - NGA Review Packet - Parts 3, 4, & 5
- **NGA Final Exam Tomorrow!!! (Tuesday 4/29)**

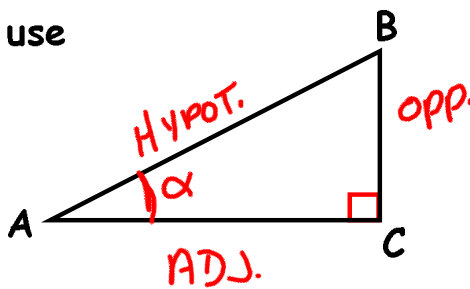
### Part 3 - Solve for missing Side Using Trig:

$$\sin \angle A = \frac{\text{opp.}}{\text{hypot.}}$$

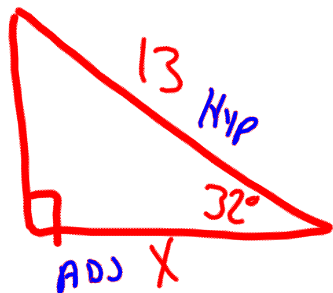
$$\cos \angle A = \frac{\text{adj.}}{\text{hypot.}}$$

$$\tan \angle A = \frac{\text{opp.}}{\text{adj.}}$$

- Label sides with respect to given angle (opposite, adjacent, hypotenuse)
- Decide which trig function to use
- Set up the trig equation
- Get the variable by itself
- Use calculator to solve



1.)



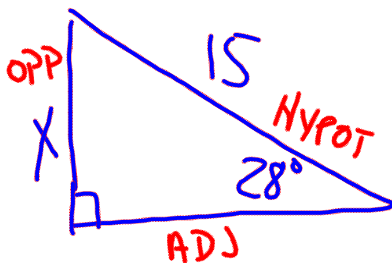
$$\cos \angle A = \frac{\text{ADJ}}{\text{HYPOT}}$$

$$\cos 32^\circ = \frac{X}{13}$$

$$13 \cdot \cos 32^\circ = X$$

$$11.02 = X$$

#4



$$\sin \angle A = \frac{\text{OPP.}}{\text{HYP.}}$$

$$\sin 28^\circ = \frac{X}{15}$$

$$15 \cdot \sin 28^\circ = X$$

$$7.04 = X$$

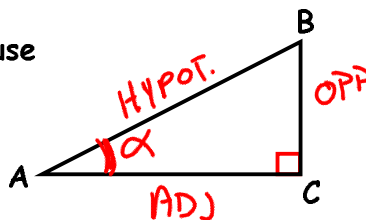
### Part 3 - Solve for missing Side Using Trig:

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$$\sin \angle A = \frac{\text{opp.}}{\text{hypot.}} \quad \cos \angle A = \frac{\text{adj.}}{\text{hypot.}} \quad \tan \angle A = \frac{\text{opp.}}{\text{adj.}}$$


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- Label sides with respect to given angle (opposite, adjacent, hypotenuse)
- Decide which trig function to use
- Set up the trig equation
- Get the variable by itself
- Use calculator to solve



1.)

$$\cos \angle A = \frac{\text{ADJ.}}{\text{HYP.}}$$

$$13 (\cos 32^\circ) = \left( \frac{X}{13} \right) \cdot 13$$

$$13 \cdot \cos 32 = X$$

$$11.02 = X$$

8.)

$$\sin \angle A = \frac{\text{OPP.}}{\text{HYP.}}$$

$$X (\sin 54^\circ) = \left( \frac{9}{X} \right) X$$

$$\frac{X \cdot \sin 54}{\sin 54} = \frac{9}{\sin 54}$$

$$X = \frac{9}{\sin 54^\circ}$$

$$X = 11.12^\circ$$

## Part 4 - Solve for Missing Angle Using Trig:

$$\sin \angle A = \frac{\text{opp.}}{\text{hypot.}}$$

$$\cos \angle A = \frac{\text{adj.}}{\text{hypot.}}$$

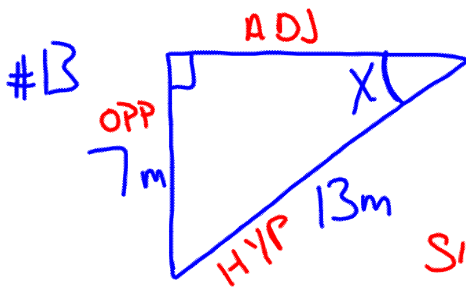
$$\tan \angle A = \frac{\text{opp.}}{\text{adj.}}$$

$$\sin^{-1} \frac{\text{opp.}}{\text{hypot.}} = m\angle A$$

$$\cos^{-1} \frac{\text{adj.}}{\text{hypot.}} = m\angle A$$

$$\tan^{-1} \frac{\text{opp.}}{\text{adj.}} = m\angle A$$

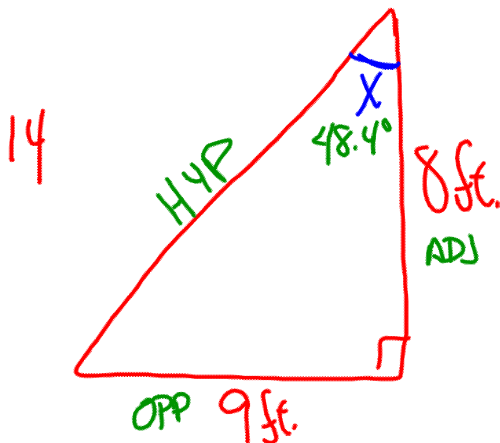
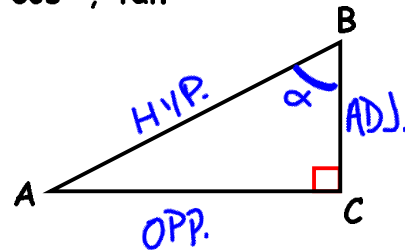
- Label sides with respect to given angle (opposite, adjacent, hypotenuse)
- Decide which trig function to use
- Set up the trig equation
- Get the variable by itself using  $\sin^{-1}$ ,  $\cos^{-1}$ ,  $\tan^{-1}$
- Use calculator to solve



$$\sin \angle A = \frac{\text{OPP}}{\text{HYP}}$$

$$\sin X = \frac{7}{13}$$

$$\sin^{-1}\left(\frac{7}{13}\right) = X \quad X = 32.6^\circ$$



$$\tan X = \frac{\text{OPP}}{\text{ADJ}}$$

$$\tan X = \frac{9}{8}$$

$$\tan^{-1}\left(\frac{9}{8}\right) = X$$

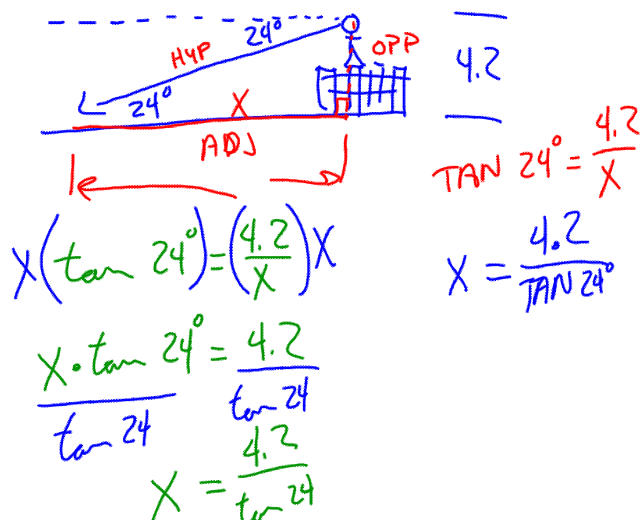
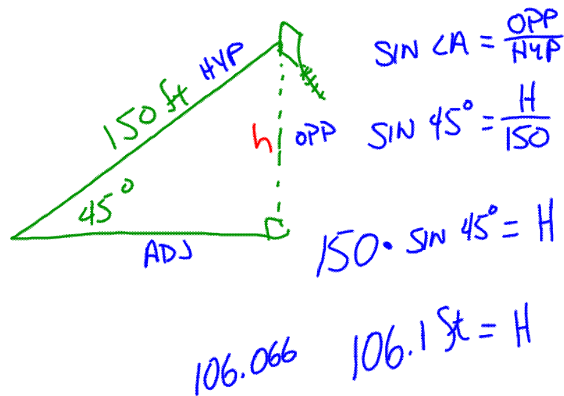
$$X = 48.4^\circ$$

**Part 5 - Word Problems:**

$$\sin \angle A = \frac{\text{opp.}}{\text{hypot.}} \quad \cos \angle A = \frac{\text{adj.}}{\text{hypot.}} \quad \tan \angle A = \frac{\text{opp.}}{\text{adj.}}$$

$$\sin^{-1} \frac{\text{opp.}}{\text{hypot.}} = m\angle A \quad \cos^{-1} \frac{\text{adj.}}{\text{hypot.}} = m\angle A \quad \tan^{-1} \frac{\text{opp.}}{\text{adj.}} = m\angle A$$

- Draw a picture and label it with known information
- Follow the steps from Part 3 or Part 4
- Angle of Elevation is ALWAYS congruent to Angle of Depression



## Part 5 - Word Problems:

$$\sin \angle A = \frac{\text{opp.}}{\text{hypot.}}$$

$$\cos \angle A = \frac{\text{adj.}}{\text{hypot.}}$$

$$\tan \angle A = \frac{\text{opp.}}{\text{adj.}}$$

$$\sin^{-1} \frac{\text{opp.}}{\text{hypot.}} = m\angle A$$

$$\cos^{-1} \frac{\text{adj.}}{\text{hypot.}} = m\angle A$$

$$\tan^{-1} \frac{\text{opp.}}{\text{adj.}} = m\angle A$$

- Draw a picture and label it with known information
- Follow the steps from Part 3 or Part 4
- Angle of Elevation is ALWAYS congruent to Angle of Depression

